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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,761	11/17/2003	James K. Ng	NG1	3368
7590	11/14/2005		EXAMINER	
Jeffrey Pearce 34825 Sultan-Startup Rd. Sultan, WA 98294			LEE, WILSON	
			ART UNIT	PAPER NUMBER
			2821	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/714,761

Applicant(s)

NG, JAMES K.

Examiner

Wilson Lee

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the **duty cycle** of claim 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections – 35 U.S.C. 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 5, "the other" is vague whether it refers to a second LED, a third LED or another pair of LEDs. Line 5, "the anode" lacks antecedent basis.

In claim 3, line 2, "n parallel paths" is vague because "n" is not defined in the claim.

In claim 10, line 2, "after-market fitting" is not understood. A further clarification is respectfully requested.

Claims 2-18 are vague by virtue of their dependency on claim 1.

Claim Rejections – 35 U.S.C. 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Rossner (6,069,452).

Regarding Claim 1, Rossner discloses a lighting arrangement comprising:

- a source of electrical power (2) (See Col. 4, lines 66-67); and
- at least one pair (6 and 10; 9 and 13; 5 and 11) of light emitting diodes driven by the power source (2) and connected in parallel such that an anode of a first one (6) of the LEDs in the pair is electrically connected to the cathode of

a second LED (10) in the pair, and the anode of the second LED (10) is electrically connected to the cathode of the first LED (6) in the pair, one of each pair of LEDs thereby being forward biased to produce light regardless of the instantaneous polarity of electrical current supplied to the LED pair by the power source (2) (See Figure 1).

Regarding Claim 2, Rossner discloses a current-limiting device (3), connected in series between the power source (2) and each LED pair.

Regarding Claim 3, Rossner discloses a plurality of LED pairs connected in series in each of number (e.g. 6) parallel paths (See Figure 1).

Regarding Claim 14, Rossner discloses that the power source supplies unrectified alternating current to each LED pair (See Figure 1 and Col. 4, lines 66-67).

Regarding Claim 17, Rossner discloses the LED pair comprises two LED dies mounted with reverse polarity (from source 2) within a single LED casing (See Figure 1 and Col. 4, lines 59-65).

Allowable subject matter

Claims 4-13, 15, 16, 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claim 19 is allowed.

The following is an examiner's statement of reasons for allowance:

The prior art neither discloses nor suggests the following limitations in combination with the remaining elements as disclosed in claim 19:

a printed circuit board (PCB) base having front and rear surfaces and laterally extending side-edge protrusions, the PCB base a mounting substrate for the LED pairs; and contact surfaces formed on edge surfaces of the protrusions; the protrusions are positioned so as to mate with at least one internal contact surface of a fitting designed to receive an incandescent, plasma-based fluorescent or halogen bulb.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Patel et al. (6,191,541) discloses a plurality of LEDs mounted on a circuit board in a light bulb. Brittell (5,749,646) discloses a plurality of lamps mounted on a circuit board in a light bulb.

Nerone (6,411,045) discloses a light emitting diode power supply comprising a plurality of branches of anti-parallel LEDs. Chang et al. (6,288,497) discloses a LED array comprising a plurality of resistors and each of the resistors being connected a branch of LEDs. Menard et al. (4,939,426) discloses a LED array comprising a string of anti-parallel connection of LEDs.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Wilson Lee whose telephone number is (571) 272-1824.

Papers related to Technology Center 2800 applications may be submitted to Technology Center 2800 by facsimile transmission. Any transmission not to be considered an official response must be clearly marked "DRAFT". The official fax number is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Wilson Lee
Primary Examiner
U.S. Patent & Trademark Office